

Processed Glass Aggregate

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Recycling facilities often reject large quantities of glass due to glass recycling regulations. The rejected glass is usually land-filled or stockpiled. However, most of this rejected glass is suitable for use as Processed Glass Aggregate (PGA). PGA is glass that has been recycled and processed into a useable product. PGA is suitable for use in the construction industry, to replace sand and gravel aggregates. By using PGA, a significant volume of waste can be kept out of landfills and used in a sustainable way.

“PGA requires no color separation – saving space and labor. It provides a new use for unmarketable or contaminated glass, eliminates the capital expense of storage containers, and can remove as much as 50% more material from the waste stream by including ceramics and other household glass not normally part of a traditional glass recycling program” says the Northeast Resource Recovery Association (NRRA). Suitable sources of PGA are glass or ceramic bottles, glass jars, ceramic tableware and cookware, vases, ceramic flowerpots, plate glass, mirror glass, and residential incandescent light bulbs.

Glass can be stockpiled indefinitely for future use since it is not a chemical and will not leak contaminants into drinking water or breakdown in the environment. Richard Lee, Director of Public Works in New London, states, “In my experience, there are no downfalls to using PGA in place of gravel as long as it is used properly and in the right applications.”

In order to use glass as aggregate material, it must first be pulverized, or crushed, in a way that will grind down all sharp edges. There are various pieces of equipment commercially available that are designed solely for this purpose, or there are some facilities that will process the glass for the purchaser. The town of New London manages such

a facility with help from the NRRA, which provides cooperative purchasing programs to its members.

Towns can send their glass to New London to be crushed and stockpiled for later use in public works projects. The NRRA hires private contractors to crush the glass, which is then stockpiled in New London. The Town of New London distributes the glass to other towns at a much lower price than gravel. PGA prices are determined by the Town of New London based on who is purchasing it. For instance, a municipality that contributes glass to be processed will pay less for PGA than a town that does not. “On average, we process around 800-900 tons of glass per year” says Lee.

Unsuitable sources of PGA are larger ceramic items such as tubs, sinks, toilets, large fixtures (unless large crushing facilities are available), lab or medical waste glass, TV tubes, computer monitors, automotive glass, tempered glass, hazardous product containers, and fluorescent light bulbs.

For more information, or if you are looking to use PGA in your project, contact: Richard Lee, Public Works Director, Town of New London, (603)526-6337, nlbd@tds.net

References

“Processed Glass Aggregate: An Alternative Reuse for Post-Consumer Glass.” NRRA Educational Bulletin 2002.

“The Northeast Resource Recovery Association.” 2010. <<http://www.nrra.net/>>.



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